



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,340	03/29/2001	Yoriaki Matsuzaki	018793-243	8537

7590 07/11/2003
Robert G Mukai
Burns Doane Swecker & Mathis
PO Box 1404
Alexandria, VA 22313-1404

EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,340

Applicant(s)

MATSUZAKI ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11131000.

The rejection is adequately set forth in paragraph 3 of the office action mailed 1/16/03, Paper No. 10, and is incorporated here by reference.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leoffler (U.S. 4,514,226).

The rejection is adequately set forth in paragraph 5 of the office action mailed 1/16/03, Paper No. 10, and is incorporated here by reference.

5. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (U.S. 6,031,019) or Komatsu et al. (U.S. 6,379,443) either of which in view of Leoffler (U.S. 4,514,226).

The rejection is adequately set forth in paragraph 6 of the office action mailed 1/16/03, Paper No. 10, and is incorporated here by reference.

6. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (U.S. 6,031,019) or Komatsu et al. (U.S. 6,379,443) either of which in view of Ohyama et al. (U.S. 5,359,075).

The rejection is adequately set forth in paragraph 7 of the office action mailed 1/16/03, Paper No. 10, and is incorporated here by reference.

Response to Arguments

7. Applicants' arguments filed 5/5/03 have been fully considered but they are not persuasive.

Specifically, applicants argue that:

(a) JP 11131000 does not disclose resin colored by water-insoluble coloring matter as presently claimed.

(b) Leoffler does not disclose colorant as presently claimed.

(c) Tsutsumi et al. or Komatsu et al. do not disclose quinophthalone or pyridine azo dye as presently claimed.

(d) Ohyama is not a relevant reference against the present claims given that Ohyama discloses the use of quinophthalone colorant in liquid crystal material not ink as presently claimed.

With respect to argument (a), applicants argue that the ink of JP 11131000 is made by dissolving coloring matter in solvent, followed by dropping this solution of coloring matter into water containing a dispersant which creates an emulsion, followed by removing solvent from the emulsion to form an ink which comprises coloring matter dispersed in water and dispersant and that this is in direct contrast to the present claims which require a resin colored by the water-insoluble coloring matter.

However, it is noted that page 52, lines 5-11 of the present specification disclose that the ink of the present invention is made by dissolving coloring matter in solvent followed by adding this material to resin followed by adding water to form dispersion and conduct emulsification, followed by removing solvent. This appears to be almost identical to the process disclosed by JP 11131000 as described above and thus, contrary to applicants' arguments, it would also appear that the ink of JP 1113100 is the same as the ink presently claimed. Clarification is requested.

Applicants argue that JP 11131000 do not disclose resin as presently claimed. However, it is noted that JP 1113100 discloses the use of dispersant that is a resin. While the dispersant may not be the same resin utilized in the present invention, it is noted that there is no requirement in the present claims regarding the specific type of resin.

With respect to argument (b), applicants argue, and examiner agrees, that Leoffler discloses pyridine azo colorant comprising B substituent, corresponding to presently claimed R_{12} substituent, which is C_1 - C_3 alkyl group while the present claims require that R_{12} is an alkyl group containing 4 or more carbon atoms.

However, examiner previously argued that propyl and butyl are homologs-compounds differing regularly by the successive addition of the same chemical groups, in the present instance, alkyl groups, and the courts have held, as found in *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977), that compounds which are homologs are “generally of sufficient close structural similarity that there is a presumed expectation that such compounds possess similar properties”. In light of the cited case law, it therefore would have been obvious to one of ordinary skill in the art that colorant disclosed in the present claims is but an obvious variant of the colorant disclosed in Leoffler, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

In response, applicants note that the present specification provides comparative data in Tables 2 and 3 which establishes the criticality of using pyridine azo colorant which has R_{12} which is an alkyl group containing 4 or more carbon atoms as opposed to using pyridine azo colorant which has R_{12} which is C_3 alkyl group as disclosed by Leoffler. Applicants argue that the data shows that the presently claimed colorant produces ink superior in light resistance.

It is noted that when comparing examples 99, 102, and 104, which each comprise pyridine azo colorant which has R_{12} which is C_3 alkyl group, namely, colorants 117, 124, and 128 as set forth in Table 2, with examples 100, 103, and 105, respectively, which each comprise pyridine azo colorant which has R_{12} which is C_4 alkyl group, namely, colorants 118, 125, and 129 as set forth in Table 2, the inventive inks are shown to have superior light resistance, i.e. optical density of 90 to 100%, as compared to comparative inks which exhibit optical density of 80 to less than 90%. However, it is the examiner’s position that this data does not provide surprising or unexpected results over Leoffler given that there does not appear to be a significant

Art Unit: 1714

difference between inks comprising pyridine azo colorant that has R_{12} that is C_3 alkyl group, and inks comprising pyridine azo colorant that has R_{12} that is C_4 alkyl group. That is, the difference in optical density between the inventive inks and the comparative inks can be less than 1%, i.e. optical density of 90% versus "less than 90%" which clearly encompasses values such as 89.9%. Thus, it appears that inks comprising pyridine azo colorant which has R_{12} that is C_3 alkyl group, as disclosed by Leoffler, are almost identical to ink comprising pyridine azo colorant which has R_{12} that is C_4 alkyl group, as presently claimed, and that the data set forth in the present specification supports examiner's position that the colorant of Leoffler and the colorant presently claimed are "generally of sufficient close structural similarity that there is a presumed expectation that such compounds possess similar properties" and that it would have been obvious to one of ordinary skill in the art that colorant disclosed in the present claims is but an obvious variant of the colorant disclosed in Leoffler, and thereby one of ordinary skill in the art would have arrived at the claimed invention. Thus, it is the examiner's position that the data does not provide clear and convincing evidence of patentability of the present claims over Leoffler.

Applicants also argue that all the pyridine azo colorants of Leoffler which comprise cyano group as required in the presently claimed colorant possess R_{12} which is a methyl group not alkyl group containing 4 or more carbon atoms as presently claimed. However, "applicant must look to the whole reference for what it teaches. Applicant cannot merely rely on the examples and argue that the reference did not teach others." *In re Courtright*, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). Further, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960).

With respect to argument (c), it is agreed that Tsutsumi et al. or Komatsu et al. do not disclose quinophthalone or pyridine azo dye as presently claimed which is why each reference is used in combination with either Leoffler or Ohyama which disclose pyridine azo dye or quinophthalone as presently claimed.

With respect to argument (d), it is noted that in addition to use in liquid crystal materials, col.1, lines 7-8 and col.2, lines 45-50 of Ohyama et al. disclose that the quinophthalone compound is also used to color polymeric materials. This is especially relevant to the present invention which requires resin colored with quinophthalone as well as to either Tsutsumi et al. or Komatsu et al., with which Ohyama et al. is combined, which each are drawn to inks containing colored resin.

Thus, given that Ohyama et al. disclose the use of quinophthalone for producing colored polymeric materials and that the quinophthalone is used due to its stability to heat and light and given that Tsutsumi et al. or Komatsu et al. are both drawn to inks comprising colored resin wherein it is important that the inks are stable to light and heat so that the inks do not fade, it is the examiner's position that there is good motivation to combine Tsutsumi et al. or Komatsu et al. with Ohyama et al.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1714

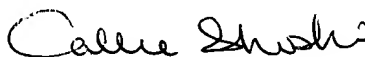
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

CS
July 9, 2003


Callie E. Shosho
Primary Examiner
Art Unit 1714